

## MEMORANDUM

**DATE:** February 3, 2011  
**TO:** Policy Committee  
**FROM:** W. Scott Whyte, Senior Landscape Planner  
**SUBJECT:** Development Standards -Landscaping/Preserving Vegetation during Development

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### I. Preserving vegetation during development

Existing open space requirements through the Chesapeake Bay Preservation Ordinance, buffer preservation through existing policies and the Zoning Ordinance, and existing landscape requirements per the Zoning Ordinance all play a role in preserving trees and vegetation during development. The Chesapeake Bay Preservation Ordinance provides the majority of existing tree preservation regulations, mostly through Resource Protection Areas (RPA) provisions. While this ordinance is a significant part of the development review process, it is administered by the Environmental Division and outside the scope of the Zoning and Subdivision Ordinance Update process.

Buffer preservation is addressed in a separate Policy Committee memo; this memo focuses on the tree preservation regulations found in the landscape portion of the Zoning Ordinance. In short, the landscape ordinance requires certain landscape areas to be provided and encourages existing trees to be used to fulfill these requirements. Per ordinance section 24-93, existing specimen and mature trees receive extra tree credits to encourage developers to preserve trees.

The scope of work for the landscaping portion of Development Standards includes both a general review of the existing landscape ordinances that help preserve vegetation and consideration of the proposed specimen tree policy that was suggested in the 2009 Comprehensive Plan revision. Also suggested in the 2009 Comprehensive Plan were improvements to the implementation of existing regulations. Staff has undertaken efforts in this regard as they do not require ordinance revisions.

### II. Discussion items

#### A. Specimen Tree Policy

##### 1. Description of issue/ problem

- *While the County has a number of tree save requirements for areas outside of development limits, there are instances in which the best specimen trees on sites are not preserved due to their location within clearing limits. There is little incentive to go through the extra effort required to preserve specimen trees within development limits, particularly if it reduces the developable area.*

##### 2. History

- *The most recent version of landscape section of the zoning ordinance was adopted in 1999 and requires multiple landscape areas and encourages existing trees to be used in these areas. These required landscape areas include: areas adjacent to rights of way and buildings, rear and side yards, and parking lots.*
- *Section 24-93 first appeared in the ordinance in 1999 and is intended to promote the preservation of existing mature and specimen trees through extra tree credits.*

- During the 2009 Comprehensive Plan revision, Planning Commissioners requested that staff research adopting an optional specimen tree policy and review existing regulations and other possible options.
- 3. Comprehensive Plan GSAs, public input, PC and BOS direction
  - CC 5.2 - Consider adopting a specimen tree policy that would enable developers who wish to preserve specimen trees that are not within required tree save areas, an option of gaining a waiver to delete another portion of the landscape requirements in order to preserve the more desirable existing trees.
  - During the Planning Commission public forums in the fall, the J4Cs endorsed the adoption of a specimen tree ordinance.
  - There was no additional PC or BOS direction provided regarding this topic.
- 4. Solutions and policy options
  - Revise the ordinance to allow developers the option of preserving specimen trees that are not located in a required tree save area in exchange for the ability to develop a portion of the property that is within a required tree save area, thus giving the developer more flexibility in preserving specimen trees instead of less desirable trees elsewhere on site.
  - The City of Williamsburg has a specimen tree ordinance which has worked well. A link to this ordinance is provided:  
<http://www.williamsburgva.gov/index.aspx?recordid+1467&page+273>.
  - Staff recommends making this an option in the ordinance instead of a policy so that all cases can take advantage of this possibility, not just the legislative cases.
- 5. Staff Recommendation
  - Staff recommends revising the ordinance to add an optional incentive to preserve specimen trees outside required tree save areas. This could provide an incentive to developers who want to preserve a specimen tree by reducing the tree save requirements on a different section of the development site in exchange for preserving the specimen tree. The desired effect would be that developments can preserve more specimen trees on site without having to give up developable area.

## **B. Additional Tree Preservation Techniques**

1. Description of issue/ problem
  - Staff investigated ways to improve our methods of enforcing the tree preservation regulations already in place. Staff reviewed current regulations and found that improvements could be made in the way we review tree protection plans, what we require on tree protection plans, and the way we go about enforcing these regulations. The intent of these changes would be to improve our success of properly preserving existing trees on construction sites.
  - Staff was also asked to research additional tree preservation techniques used by other localities such as site fingerprinting and tree canopy requirements.
  - **Site fingerprinting**, also known as minimal disturbance techniques, is a practice that minimizes ground disturbance by identifying the smallest possible land area that can practically be impacted during site development. Minimizing the amount of site clearing and grading reduces the overall hydrologic impacts of site development. Ground disturbance is typically confined to areas where structures, roads, and rights-of-way will exist after construction is complete. Development is also placed away from environmentally sensitive areas, future open space, and tree save areas, future restoration areas, and temporary and permanent vegetative forest buffer zones. Existing

vegetated or open space may be preserved instead of clearing a portion of the site in order to create lawn areas. These practices may be applied on any site and may include the following techniques: reducing pavement area and the compaction of permeable soils; (2) minimizing construction easements and material storage areas, and providing appropriate construction sequencing; (3) preserving existing trees through site design and layout; (4) reducing total impervious area; (5) disconnecting impervious areas; and (6) maintaining existing topography and flow paths.

- Below is a link to an article on site fingerprinting:  
<http://www.docstoc.com/docs/4990835/site-development>.
- **Tree canopy legislation** is another method of tracking existing trees on development sites. During the 2008 General Assembly Session, the General Assembly adopted legislation enabling localities in Northern Virginia to require by ordinance, the preservation of tree canopies during the development process. Fairfax County created and adopted a tree canopy ordinance which has served as a model ordinance, and later the Cities of Virginia Beach and Chesapeake pursued enabling legislation and adopted similar regulations. The Fairfax County ordinance requires that the site plan for any subdivision or development provide for the preservation or replacement of trees on the development site such that the minimum tree canopy or tree cover percentage twenty years after development is projected to be as follows:
  - 10% tree canopy for sites zoned business, or commercial, or industrial;
  - 10% tree canopy for residential sites zoned for twenty or more units;
  - 15% for a residential site zoned for more than 8, but less than 20 units per acre;
  - 20% tree canopy for residential sites zoned for more than 4 but less than 8 units per acre;
  - 25% tree canopy for residential site zoned for more than 2 but less than 4 units per acre; and
  - 30% for residential sites zoned for 2 or fewer units per acre.Fairfax County stated that the ordinance requirement would help the County comply with federal regulations for the clean water and air acts and Chesapeake Bay requirements, and help avoid being named a nonattainment area.
- A link to a Virginia Tech Tree Ordinance Data Bank with the Fairfax ordinance and many others is below.  
<http://www.cnr.vt.edu/vtod/home.cfm>
- 2. History
  - See A above
- 3. Comprehensive Plan GSAs, public input, PC and BOS direction
  - CC 5.1- Consider adopting a specimen tree policy that would enable developers who wish to preserve specimen trees that are not within required tree save areas, an option of gaining a waiver to delete another portion of the landscape requirements in order to preserve the more desirable existing trees.
  - CC 5.3 - Review and amend applicable County ordinances and/or policies as enabled by the Code of Virginia to require a more detailed phased clearing plan that minimizes the removal of existing trees and ensures tree preservation measures are implemented during the site plan review and pre-construction phase of development.
  - During the Zoning and Subdivision Ordinance Update process, PC members asked staff to research other methods of tree preservation.

- *During the Planning Commission public forums in the fall, the J4s presented concerns and recommendations regarding tree conservation efforts with respect to the review process, clear cutting, identifying trees, tree canopies, and other measures.*
- *There was no additional BOS direction regarding this topic.*
- 4. Solutions and policy options
  - *Staff has begun implementing methods of improving our existing tree preservation efforts by the following actions. While these actions are not part of the ordinance revision, they are significant contributors to successfully preserving trees:*
    1. *Reviewing tree preservation areas beginning with conceptual plans, suggesting phased clearing when applicable and conducting site visits with the applicant to evaluate tree save opportunities.*
    2. *Requiring accurate depiction of existing trees on site plan, to scale, shown in the field conditions;*
    3. *Tightening review of tree protection plans, making sure tree protection fencing is depicted in the proper location;*
    4. *Putting more emphasis on tree protection measures during pre-construction meetings and improving communication between the Planning and Environmental divisions;*
    5. *Educating inspectors on proper tree protection measures and identification of native plant species;*
    6. *Enforcing tree protection measures found in field during inspections.*
    7. *Enforcing correction of violations, not only for encroachment into protected areas but also for improper techniques that are found in the field that resulted in damaged areas.*
  - *Staff researched site fingerprinting techniques and concluded that this type of construction technique provides many environmental benefits; however, it would be nearly impossible to require one development technique to be used on the many diverse development sites we have in James City County. No other locality that requires only this type of development could be found. Many of the techniques used are currently encouraged and incentivized by the environmental division through LID techniques. Adopting any of these techniques would add another layer of regulations without significantly increasing amount of trees preserved, and would favor applicants with GIS and GPS capabilities. In short, staff concludes that it would be more appropriate to give incentives for using some of the design techniques than to draft an ordinance that requires all developments to use one design technique that can be interpreted in many different ways by different designers.*
  - *Staff researched the tree canopy legislation and found that while we could become eligible for the legislation, the technique as drafted by Fairfax County would not increase tree preservation as much as the regulations we already have in place. A sample drawing of a one acre site with the minimum amount of tree preservation required in James City County has been provided. Note that our minimum requirements for a by-right commercial development on a non-Community Character Corridor results in more vegetation being preserved than what Fairfax would require with its tree canopy legislation in place. Fairfax would only require that 10% of the site have the tree canopy restored. Under James City County requirements over 30% of the tree canopy would be restored. Also, note that Fairfax requires tree preservation in residential areas that James City County does not regulate.*

5. Staff recommendation

*Staff recommends efforts to improve our existing tree preservation methods. James City County's tree preservation requirements are some of the most substantial in the State and improving our methods of enforcement will greatly increase our success with preservation of vegetation. Staff does not recommend adopting site fingerprinting techniques or tree canopy legislation because they would not increase the amount of existing vegetation preserved on site and would add another layer of regulations making the process less predictable and more burdensome. County regulations that are currently in the code provide many of the same and in some case more tree protection than these techniques offer. Doing a better job of enforcing the current regulations could result in more trees being preserved than adopting new regulations.*

III. Conclusion

Staff recommends that the Policy Committee support staff's proposal to revise the landscape ordinance to add an optional incentive to preserve specimen trees outside required tree save areas and to improve our methods of tree preservation using the existing regulations.

Attachments:

1. Preserving Vegetation During Development